Appendix D: Submission and Prioritization of Initiatives

NOTE: These procedures were established in the 1999 LMS. The 2005 Revised LMS calls for the Work Group to revise these procedures (see Mitigation Initiative 2005-002, Revise Scheme to Prioritize Initiatives), at which time this appendix will be replaced.

The following criteria have been selected and prioritized by the Working Group to evaluate mitigation initiatives. Weighting factors have been assigned to certain criteria.
Other criteria are included to provide necessary project information.

The Local Mitigation Strategy is a "work in progress". As such, the Working Group may make adjustments to this section as the process continues.

Recommended Local Mitigation Strategy Project Evaluation and Prioritization Criteria

1. Meeting LMS Goals and Objectives (Consistency with Guiding Principles) and Number of Goal(s) met- Points awarded from Goals and Objectives List to a maximum of 150 points.
2. Percentage of population served by the project (permanent population) - 20 points if up to 10% served, 40 points if up to 25%, 60 points if up to 40%, 80 points if up to 65%, 100 points if up to 80%, 130 points if up to 100%.
3. Type and Number of Hazards Addressed. – points awarded from Hazard List priorities to a maximum of 110 points (listed below).
4. Cost Effectiveness - Based on Cost/Benefit Analysis developed by the applicant using LMS Criteria provided below*). A ratio of 1 to 1 will receive 20 points, thereafter, each increase will receive an additional 10 points e.g. 1 to 2 ratio will receive 20 points, etc.)
5. *Economic Benefits – 30 points if economic benefit is demonstrated
6. **Social Benefits - 20 points if social benefit is demonstrated.
7. Environmental Benefits – 20 points if environmental benefit is demonstrated.
8. Time Frame - 20 points if 6 months or less. 10 points if 6 months to one year. 5 points if one to two years. 0 points if more than two years.
9. Financial Feasibility – Yes/No
10. Technical Feasibility – Yes/No
11. Funding Availability – Yes/No,
12. Legal Authority – Yes/No
13. Consistency with Plans, Codes, Ordinances, Policies, etc. - Yes/No

*Economic Benefits are those that would stabilize or reduce loss of economic functions such as business operations. For example, such a benefit would accrue from a project to improve debris removal and reduce the time needed for businesses to become accessible to their customers.

**Social Benefits are those that contribute to the general welfare of the population, such as installing shutters in a community center to protect it from damage, or projects that reduce hazard impacts in public parks.

Monroe County LMS Goals and Objectives

1. Preservation and Sustainability of Life Health, Safety, and Welfare (most important goal)
   50 points

2. Preservation of Infrastructure From Hazard-Related Damage, including
   - Utilities
   - Power
   - Water
   - Sewer
   - Communications

   30 points

3. Minimize Damage and Maintain Roads and Bridges During a Disaster, including
   - Traffic Signals
   - Street Signs

   30 points

4. Protection of Critical Facilities From Hazard-Related Damage, including
   - Public Buildings/Schools

   10 points

5. Preservation of Property and Assets From Future Losses.
   10 points

6. Preservation of Economy During Times of Disaster, including
   - Business Viability

   10 points

7. Preservation and Protection of the Environment
   - Natural
   - Historic

   10 points

Elements for LMS Cost/Benefit Analysis

Land-Based, Construction and/or Equipment Projects

1. Estimated Project Cost:

2. Expected Useful Life of the Project

3. Frequency of the hazard the project is designed to address, and if applicable accumulated cost of past repairs from emergency events both declared and undeclared

4. Estimate of direct and indirect benefits
   - Casualties –Estimate the number of deaths and injuries, which could be avoided by the mitigation action.
   - Damage –Estimate the amount of physical damage for both structural and non-structural portions of the project.
   - Contents Damage –Provide an estimate of the physical damage to a building's contents.
   - Displacement Cost – Estimate the projected amount of rental and other costs incurred when the facility is not in use.

5. Monetary Value
   - Assign a dollar value to primary damage, including contents.
   - Assign dollar values to ancillary damage such as social benefits, environmental damage, and loss of function.

6. Disaster Frequency –Document the years of repeated occurrence of the hazard also indicate declared disasters.

7. Determine cost/benefit ratio and include in project proposal.

Non-Construction Projects, e.g. Planning Studies, Maps, Public Information and Education, etc.

1. Estimated Project Cost:

2. Frequency of the hazard the project is designed to address, and if applicable accumulated cost of past repairs from emergency events both declared and undeclared

3. Estimate of direct and indirect benefits
   - Describe Economic Benefits of project and provide approximate percentage of benefits.
   - Describe Social Benefits, of project and provide approximate percentage of benefits.
   - (For example, studies relating to ways to address disaster-related business loss may have 100% economic benefit, etc.)
   - Describe Environmental Benefits of project and provide approximate percentage of benefits.
   - Disaster Frequency –Document the years of repeated occurrence of the hazard also indicate declared disasters.

5. Determine cost/benefit ratio

Monroe County LMS Working Group Hazards List (revised pursuant to Hazard Identification Process. October 1999)

1. Tropical Cyclones, Hurricanes, Tropical Storms, Tropical Depressions, and other Severe Weather – 20 points
   - Floods
   - Tornadoes
   - Wind
2. Utility Outages/Disruption – 15 points
   - Electric Power
   - Water
   - Sanitation
3. Transportation Disruption – 10 points
4. Economic Emergencies – 10 points
5. Communications Disruption - 10 points
6. Mass Immigration – 5 points
7. Wild Land Fires – 5 points
8. Hazardous Materials Incidents – 5 points
9. Coastal Oil Spills - 5 points
10. Radiological Emergencies – 5 points
11. Epidemiological Emergencies – 5 points
12. Drought – 5 points
13. Terrorism/Civil Disturbance – 5 points
14. Military Conflict – 5 points

After the completion of the Evaluation Process, the projects receiving the highest total points will be given preference for LMS Working Group recommendation.

Hypothetical Examples:

Scores are based on "Procedures to Prioritize Municipal and County Mitigation Initiatives".

Example Number 1: Proposal to conduct professional county-wide study to determine the short and long-term effects of salt water on local landscaping, including recommendations for ways to prevent future vegetation loss.

1. Meeting LMS Goals and Objectives (Consistency with Guiding Principles) Points awarded from Goals and Objectives List to a maximum of 150 points. Project meets Preservation of Property and Assets, Preservation of the Economy – 20 points
2. Percentage of people served by the project (permanent population) – Percentage of people served – 100% of county population – 130 points
3. Type and Number of Hazards Addressed. – Number of points awarded from Hazard List Priorities. Addresses Hazard #1 for 20 points and Hazard #12 for 5 points – 25 points
4. Cost Effectiveness - Based on Cost/Benefit Analysis developed by the applicant using LMS Criteria provided below*). A ratio of 1 to 1 will receive 10 points, thereafter, each increase will receive an additional 10 points e.g. 1 to 2 ratio will receive 20 points, etc.) – 1/3 cost benefit ratio = 30 points
5. Economic Benefits – 30 points if economic benefit is demonstrated – Project is designed to identify means of preserving landscape a vital part of the county's allure for tourism – 30 points
6. Social Benefits - 20 points if social benefit is demonstrated - the entire Key's society could benefit from protection of county vegetation – 20 points
7. Environmental Benefits –20 points if environmental benefit is demonstrated – saving trees and plants is critical to the environment.
8. Time Frame - 20 points if 6 months or less. 10 points if 6 months to one year. 5 points if one to two years. 0 points if more than two years. – Project time frame is two years – 5 points
9. Financial Feasibility – Yes/No – Yes
10. Technical Feasibility – Yes/No - Yes
11. Funding Availability – Yes/No - Yes
12. Legal Authority – Yes/No- Yes
13. Consistency with Plans, Codes, Ordinances, Policies, etc. - Yes/No- Yes

Total Number of Points = 280

Elements for LMS Cost/Benefit Analysis

Non-Construction Projects, e.g. Planning Studies, Maps, Public Information and Education, etc.

Example #1: Proposal to conduct professional countywide study to determine the short and long-term effects of salt water on local landscaping. The study will include recommendations for prevention of future loss of vegetation.

1. Estimated Project Cost: $30,000
2. Frequency of the hazard the project is designed to address, and if applicable accumulated cost of past repairs from emergency events both declared and undeclared

   Local vegetation is affected by salt-water spray in events involving high winds, especially hurricanes and serious storms. This problem occurred from Hurricane Georges, September 1998 and Tropical Storm Mitch, November 1998 and will occur in any future wind event. Such events have a high frequency of occurrence.

3. Estimate of direct and indirect benefits
   - Describe Economic Benefits of project and provide approximate percentage of benefits- Protection of vegetation from the detrimental effects of salt water could result in 100 % benefit due to reduction in loss of landscaping.
   - Describe Social Benefits, of project and provide approximate percentage of benefits. - Protection of vegetation from the detrimental effects of salt water could result in 100 % benefit due to prevention of landscaping loss.
   - Describe Environmental Benefits of project and provide approximate percentage of benefits. - Protection of vegetation from the detrimental effects of salt water could result in 100 % benefit due to protection of natural landscaping.

4. Disaster Frequency –Document the years of repeated occurrence of the hazard also indicate declared disasters. – Hurricane Andrew, August 1992,Hurricane Georges, September 1998 and Tropical Storm Mitch, November 1998 and will occur in any future wind event. Such events have a high frequency of occurrence.
5. Provide dollar value estimate of long-term benefit – Determining a means to protect or prevent negative effects of salt water on county vegetation could result in saving approximately $1 million dollars of lost landscaping.
6. Determine cost/benefit ratio (divide project cost by benefit cost) – 1/3

Example Number 2 - Proposal by Municipality X to install emergency generators in all local business establishments within the municipality's jurisdiction.

1. Meeting LMS Goals and Objectives (Consistency with Guiding Principles)
   Points awarded from Goals and Objectives List to a maximum of 150 points. Project meets Preservation of Property and Assets and Preservation of the Economy – 20 points
2. Percentage of people served by the project (permanent population) – Percentage of people served – 100% of municipal population – 130 points
3. Type and Number of Hazards Addressed. – Number of points awarded from Hazard List Priorities. Addresses Hazard #1 for 20 points, Hazard #2 for 15 points, and Hazard #6 for 10 points – 45 points
4. Cost Effectiveness - Based on Cost/Benefit Analysis developed by the applicant using LMS Criteria provided below*). A ratio of 1 to 1 will receive 10 points, thereafter, each increase will receive an additional 10 points e.g. 1 to 2 ratio will receive 20 points, etc.) – 1/3 cost benefit ratio = 30 points
5. Economic Benefits – 30 points if economic benefit is demonstrated – Project is designed to identify means of preventing business closures from power losses after a disaster. – 30 points
6. Social Benefits - 20 points if social benefit is demonstrated – If businesses could remain open this would assist the local population by providing stores, restaurants, etc. for them to use following a disaster. – 20 points
7. Environmental Benefits –20 points if environmental benefit is demonstrated – No environmental benefits – 0 points.
8. Time Frame - 20 points if 6 months or less. 10 points if 6 months to one year.
   5 points if one to two years. 0 points if more than two years. – Project time frame is six months – 20 points
9. Financial Feasibility – Yes/No - Yes
10. Technical Feasibility – Yes/No - Yes
11. Funding Availability – Yes/No - Yes
12. Legal Authority – Yes/No- Yes
13. Consistency with Plans, Codes, Ordinances, Policies, etc. - Yes/No- Yes

Total Number of Points = 295

Elements for LMS Cost/Benefit Analysis

Land Based, Construction and/or Equipment Projects

Example #2: Proposal by Municipality X to install emergency generators in all local business establishments within the municipality's jurisdiction

1. Estimated Project Cost: $750,000

2. Expected Useful Life of the Project – 20 years

3. Frequency of the hazard the project is designed to address, and if applicable accumulated cost of past repairs from emergency events both declared and undeclared – Municipal power outages are likely to occur from high winds, especially hurricanes, serious storms, and tornadoes. This problem occurred from the tornadoes that occurred in 1997, Hurricane Georges, September 1998 and Tropical Storm Mitch, November 1998 and will occur in any future wind event. Such events have a high frequency of occurrence.

4. Estimate of direct and indirect benefits
   - Casualties –Estimate the number of deaths and injuries, which could be avoided by the mitigation action. – 0
   - Damage –Estimate the amount of physical damage for both structural and non-structural portions of the project. - 0
   - Contents Damage –Provide an estimate of the physical damage to a building's contents. - 0
   - Displacement Cost – Estimate the projected amount of rental and other costs incurred when the facility is not in use. – If businesses could not be used for two weeks following an event because of lack of power, estimated economic losses for municipal businesses are approximately $1 million

5. Monetary Value
   Assign a dollar value to primary damage, including contents. - 0
   Assign dollar values to ancillary damage such as social benefits, environmental damage, and loss of function. - $1.5 million including economic loss and social benefit to residents.

6. Disaster Frequency –Document the years of repeated occurrence of the hazard also indicate declared disasters. - This problem occurred from the tornadoes that occurred in 1997, Hurricane Georges, September 1998 and Tropical Storm Mitch, November 1998 and will occur in any future wind event. All of these events resulted in declared disasters.

7. Determine cost/benefit ratio (divide costs by benefits dollar) value and include in project proposal. - $750,000 divided by 2,500,000 = 1/3